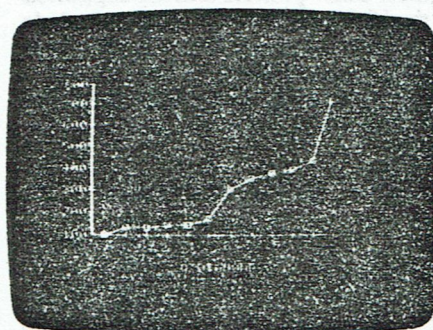# Evaluation of VisiTrend and VisiPlot from Personal Software

David H. Ahl

July 3, 1981. My financial officer handed me the results for the month of June. Not a remarkable event in itself, except that June 30 marks the end of our fiscal year.

Sitting at my desk, I got out my pocket calculator and started to manipulate the

Sample line chart.

figures to develop fourth quarter, second half, and fiscal year results. I immediately realized that the job was about twice as big as it had been a year before and even considerably larger than six months earlier. The reasons: we acquired a new magazine (*Microsystems*) at the beginning of the year, started a new magazine (*SYNC*) in January, and established a new division (Education Center) in February. All this meant that I was faced with the financial figures from seven separate operating entities rather than the four that we had at the end of the previous fiscal year.

Hence I decided that it was time to learn VisiCalc, VisiPlot, and VisiTrend. Although I had a minimal working knowledge of VisiCalc, the combination Visi-
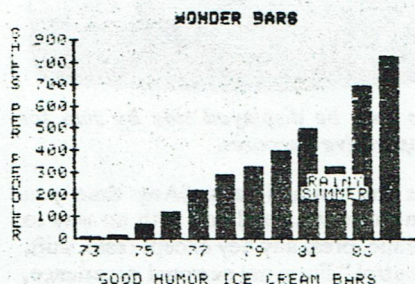
*Bar chart printed by Apple Silentype printer.*

Trend and VisiPlot package had just recently arrived and I hadn't even taken off its plastic wrapper.

My first chore was to get the monthly data for the entire fiscal year into VisiCalc. This I did with little difficulty. However, as I approached the end of the first quarter the speed with which the program was accepting the data slowed noticeably. Each column of the table consisted of 28 individual entries such as total sales, subscription revenue, retail sales, Periph-
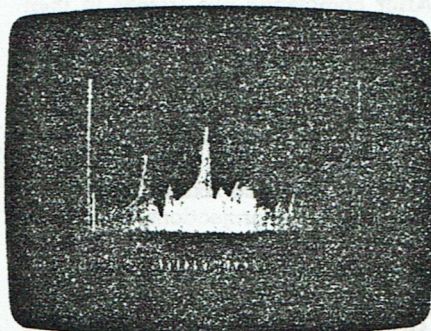
Sample area chart.

erals Plus individual sales, and the like. In addition, each column had eight calculated subtotals and eight calculated percentages. Thus, at the end of a quarter the program was dealing with approximately 40 x 3 = 120 separate pieces of data.
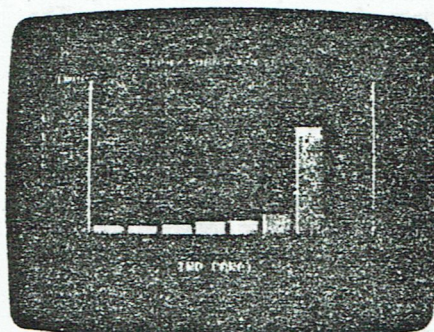
Sample bar chart.

By the end of six or seven months of data, entry had become annoyingly slow, and by the end of twelve months, it had really bogged down. Nevertheless, I was consoling myself with the thought that, once in, it was there forever for whatever analyses I may wish to do. All told, it took about two hours to enter the approximately 275 data points for a full fiscal year. I had also, in that time, entered all of the column and row titles and the various formulas for calculations of subtotals and percentages, and had printed out the resultant table.

A brief aside. Printing is probably one of the least capable attributes of VisiCalc. There is no "intelligence" whatsoever built into the print routines. For example, the

printer will space across by individual spaces to "print out" a blank line. Furthermore, the routines do not take advantage of printers that do have some "intelligence" built in. I use a Diablo 1640 printer with bi-directional printing and a fairly large print buffer built in. While not as fast as a line printer, for normal correspondence the printer is more than adequate. On the other hand, VisiCalc does not take advantage of the buffer or bi-directional printing capabilities and, appears to wait for a signal from the printer that it has printed a character before sending the next one. Thus, a 60-line page that is normally printed out in about two minutes, takes over ten minutes with VisiCalc.

I don't mean to sound negative. The program is still faster, more capable, and more accurate than any alternative, particularly pocket calculator and pencil. Nevertheless, there are certain frustrations in using it.

VisiPlot

Currently available for only the Apple computer, VisiPlot is one-half of a new package from Personal Software that also includes VisiTrend. The VisiPlot portion of the package, as its name suggests, allows one to display data in graphical form on the screen and print it out on a wide variety of supported line printers. The program can make six types of charts: line, bar, area, pie, hi-lo, and scatter. In addition, it allows combining the same or different types of charts. For example, a line chart may contain one, two or three lines. A comparative bar chart may display two different bars on the same X axis or two bar charts may be displayed one above the other. A line chart may be combined with a hi-lo chart. While the possibilities are not endless, they should be sufficient to meet most normal business needs.

Like VisiCalc, the VisiTrend and VisiPlot package is entirely menu-driven. Actually, VisiTrend and VisiPlot make much more extensive use of menu commands than does VisiCalc. Menu items are selected with the right and left arrow keys and space bar. Although the commands do

Combination line and bar chart.

what one would "naturally" expect, to provide even more help, when a one-word menu item is selected, it is highlighted in reverse video, and a more complete explanation of the item appears immediately above it. Even if one presses the wrong key, or selects an inappropriate item, there are built-in escapes and exits on every level at nearly every point. Usually, when using a program for the first time, I get into some kind of trouble that necessitates reloading the entire disk. In my first eight hours with VisiTrend and VisiPlot, this did not happen once. I am not saying that all went perfectly; however, when faced with a difficult situation, I was always able to bail out without losing any data and without having to reload the program.
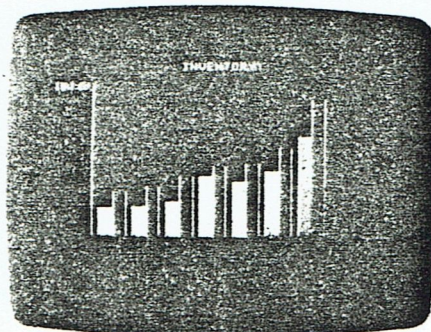
*Bars may be displayed side by side for comparative purposes.*

As the manual says, "Any time you seem to be at a dead end with no way to continue, press any key except reset, shift, or control." From my personal experience, I can verify that this advice really works.

A Tutorial Manual

The manual is divided into three sections. The first section (24 pages) is an introduction to VisiTrend and VisiPlot including definitions, program and disk loading instruction, and some general background about using the menu. The majority of the manual, 105 pages in all, is devoted to a tutorial in how to use VisiPlot, VisiTrend, and the data entry and edit program. This tutorial section is divided into five lessons, each of which takes about one hour to go through fairly thoroughly.

After completing two lessons in their entirety, I skipped around a bit to get to the sections describing what I really wanted to do with the data that I had. As a result, I probably missed learning about some of the features and nuances of the system. On the other hand, in a six-hour period, I was able to produce sixteen charts and run several trend projections, which was far more productive than the same six hours would have been with calculator, pencil, and graph paper.

The third section of the manual, 38 pages, is a reference guide to the use of VisiTrend and VisiPlot. I saw nothing in it that was not previously covered in the
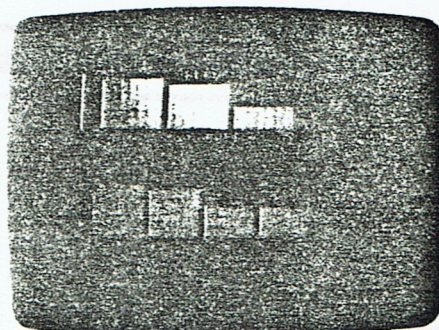

Two groups of bars may be displayed simultaneously.

tutorial section. However, it may be more efficient once one is proficient with the system, to look up desired capabilities in the reference section, rather than leafing around in the tutorial section.

Personal Software also thoughtfully includes a pocket reference card which has no less than fourteen 3 x 6" panels of information. One wonders whether pocket reference cards aren't getting a bit out of hand; but I found this one quite useful.

As the saying goes, "A picture is worth a thousand words," hence I have included a substantial number of charts with this article. Some of them are taken directly from the screen while others are printed on an Apple Silentype printer. There is little difference between the two as the print out program merely replicates the high resolution screen on the Silentype printer. Other printers that are supported by the VisiTrend/VisiPlot program include the IDS Paper Tiger 440 and 445 (with graphics option installed), theNEC Spinwriter 5510, 5515, 5520, and 5525 (with graphic option installed) and the Trendcom 200.
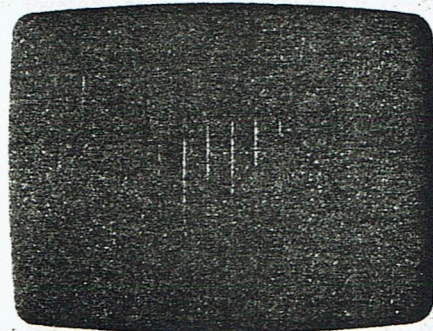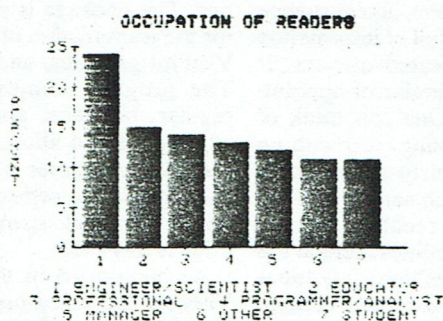

Education of Readers

91% of readers have attended college
77% have a college degree
41% have a Masters, PhD or higher
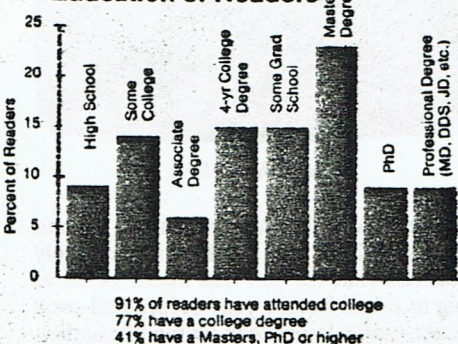
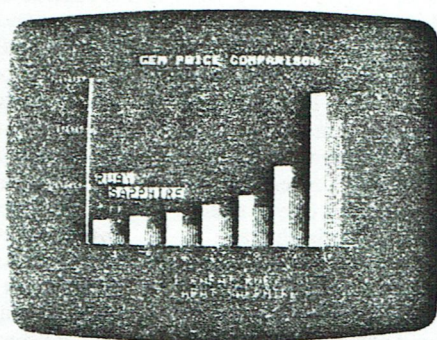*Charts may be "improved" by adding normal type.*

Data Entry Surprises

The VisiTrend/VisiPlot package contains an extensive data entry and editing facility. This facility allows the user to create a new data series, and modify existing data series. The editor allows one to jump to specific places within a list, insert new data points between existing data points, delete points, format the manner in which data are displayed, print the contents of a series and the like. Like

OCCUPATION OF READERS

1 ENGINEER/SCIENTIST   3 EDUCATOR
3 PROFESSIONAL   4 PROGRAMMER/ANALYST
5 MANAGER   6 OTHER   7 STUDENT

Bar chart printed by Apple Silentype printer.

GEM PRICE COMPARISON

Labels may be inserted anyplace on the chart.

the menu-driven plotting portion of the program, the data entry and editing portion of the program were simple to use.

However, I did not expect to have to use them with live data as I had all of the data that I wanted entered on a VisiCalc disk. VisiTrend/VisiPlot has the ability to accept data from VisiCalc which has been stored in the "standard" data interchange format (DIF). However, as a sentence buried in the middle of page 2-49 points out, "This means that interchange between

the two products is only possible if you have a copy of the VisiCalc program at a version number higher than the 1.37." While I do, it just so happens it was not the one that I used in entering all the fiscal year data.

Even so, it appears that it would have taken at least as much time to edit the VisiCalc data for plotting as it did to enter new data. For example, my columns consist of three individual months followed by a quarterly summary. For plotting

purposes, each of the quarterly data points would have to be edited out. Likewise, my rows include individual sales results followed by subtotals and percents for each of our seven divisions. Again the subtotals and percents would have to be deleted. I judge that re-entering the data points that I wished to plot took no more time than editing the original VisiCalc file. This, of course, would not always be true and the data interchange feature is not one to be downgraded.

As mentioned earlier, nearly every combination of charts is possible. Unfortunately, I tried to produce several that, try as I might, I could not. For example, using the VisiTrend program (more about that later) I ran a projection of sales for the next twelve months. I attempted to plot current sales for periods one to twelve and future sales for periods thirteen to twenty-four. Unfortunately, without extensive editing, this is not possible. It was easy enough to plot both sets of data on a line chart however it was not easy to plot data set one from period one to twelve and data set two from thirteen to twenty four. Also, since most of my other charts were bar charts, I wished to present these data (twenty-four months worth) in a bar chart format. Unfortunately, I could not do it. Some experimentation indicated that the upper boundary on the number of bars that could be displayed is sixteen, however, I could not find this any place in the manual.
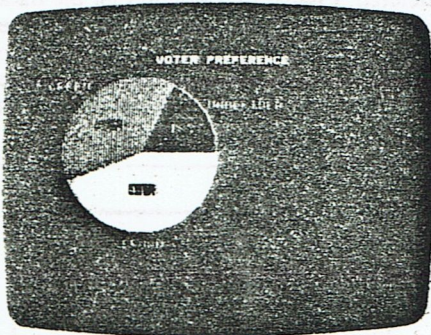
Sample pie chart.

Another minor difficulty I ran into was in the printing out of pie charts. Again, not in the manual, is the fact that a pie chart can only have eight slices and, unfortunately, I was trying to produce a ten-slice pie. Much consternation and gnashing of teeth until I figured out what was amiss and combined several of the pieces. Another small problem with pie charts: the eight different colors looked delightful on the screen, however, on the printer several of them are represented by the same method of shading. Hence, I found it was most satisfactory to use just three colors: white, black and green which, on the printer, are all distinctly different.

VisiTrend

The VisiTrend program develops ancillary data series used in analyses and forecasting techniques. The methods include derivation of moving averages, smoothing data, percent of change, leading, lagging and cumulative total functions. Additionally, new series can be created by taking ratios logs, or other mathematical or logical transformations of the data.

The program performs linear multiple regressions (using the ordinary least squares method). It also calculates and displays the major statistical measures of a multiple regression including the standard errors of the coefficients and the regression, t-statistic, R-bar squared, the F-statistic and the Durbin-Watson statistic. It also performs trend line forecasting.

Needless to say, this is an extremely comprehensive statistical package and most users will not need a fraction of what the program can deliver. Nevertheless, there are probably one or more statistical measures useful to each different user, so the program offers a complete smorgasbord.

For my purposes, I was interested in trend forecasting using linear regression and a moving average function with exponential smoothing. I had no trouble using either of these capabilities and, in about one-half hour, was able to develop several trend forecasts and moving averages. I then stored the results of these forecasts, moved back to the VisiPlot portion of the package, and plotted the results.
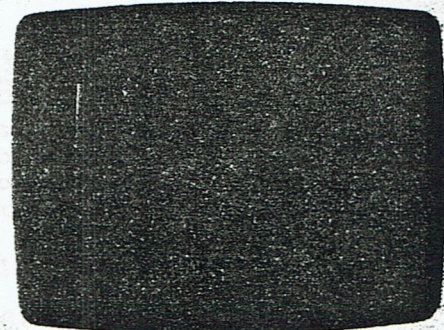
Line chart with a projection made by VisiTrend.
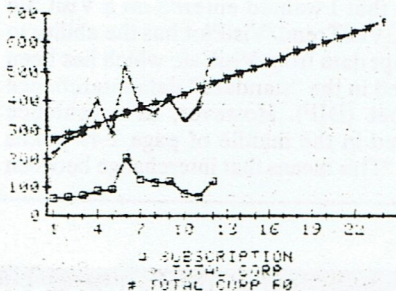
Two lines on chart with VisiTrend least squares projection.

While it is helpful to have detailed statistics, one can get overwhelmed. At one point, when I was running trend lines on virtually everything in sight, I took a break and got to thinking, "What am I going to do with all of these data?" The computer, of course, will generate anything you want. However, it is only a tool and human judgment must be used, probably more than ever before, to determine what the computer ought to be doing.

In Summary

I found the VisiTrend/VisiPlot package exceptionally user-friendly and easy to learn. The manual, particularly the tutorial section, is outstanding. While user mistakes are inevitable, the software is quite forgiving and rarely, if ever, loses any data. The package helps analyze data accurately, produces attractive charts and graphs, saves time, and is an outstanding business tool. I recommend it highly.

VisiTrend/VisiCalc is produced by Personal Software, Inc., 1330 Bordeaux Dr., Sunnyvale CA, 94086 and is available for $259.95 at computer stores throughout the country. ∎